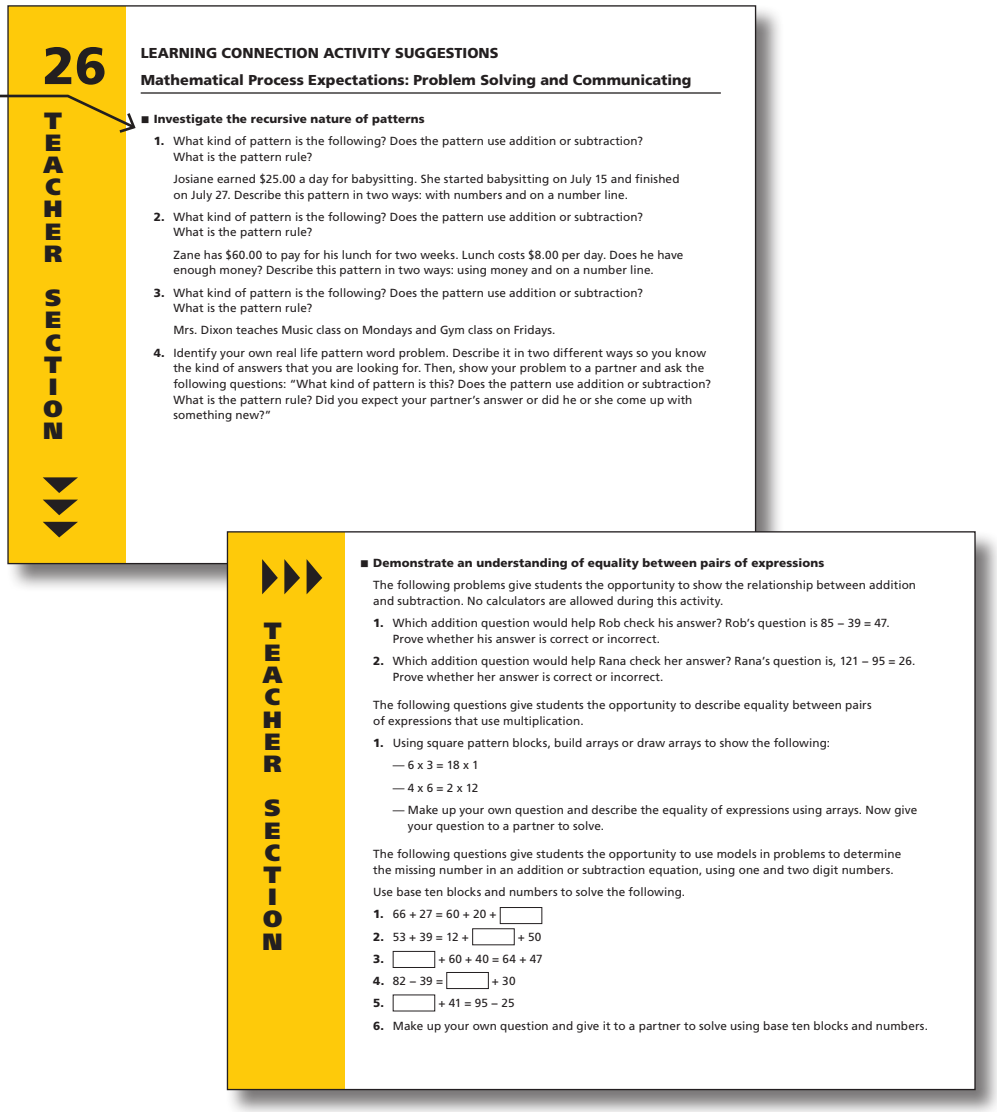
Grade 3
Teacher Section

Learning Connection Activity Suggestions: These suggestions are organized around the same key math concepts addressed in the 24 activities. They relate to some of the Mathematical Process Expectations used in the Ontario Math Curriculum.



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TEACHER SECTION

LEARNING CONNECTION ACTIVITY SUGGESTIONS

Mathematical Process Expectations: Problem Solving and Communicating

■ **Investigate the recursive nature of patterns**

1. What kind of pattern is the following? Does the pattern use addition or subtraction? What is the pattern rule?

   Josiane earned $25.00 a day for babysitting. She started babysitting on July 15 and finished on July 27. Describe this pattern in two ways: with numbers and on a number line.

2. What kind of pattern is the following? Does the pattern use addition or subtraction? What is the pattern rule?

   Zane has $60.00 to pay for his lunch for two weeks. Lunch costs $8.00 per day. Does he have enough money? Describe this pattern in two ways: using money and on a number line.

3. What kind of pattern is the following? Does the pattern use addition or subtraction? What is the pattern rule?

   Mrs. Dixon teaches Music class on Mondays and Gym class on Fridays.

4. Identify your own real life pattern word problem. Describe it in two different ways so you know the kind of answers that you are looking for. Then, show your problem to a partner and ask the following questions: "What kind of pattern is this? Does the pattern use addition or subtraction? What is the pattern rule? Did you expect your partner's answer or did he or she come up with something new?"

TEACHER SECTION

■ **Demonstrate an understanding of equality between pairs of expressions**

The following problems give students the opportunity to show the relationship between addition and subtraction. No calculators are allowed during this activity.

1. Which addition question would help Rob check his answer? Rob's question is 85 – 39 = 47. Prove whether his answer is correct or incorrect.
2. Which addition question would help Rana check her answer? Rana's question is, 121 – 95 = 26. Prove whether her answer is correct or incorrect.

The following questions give students the opportunity to describe equality between pairs of expressions that use multiplication.

1. Using square pattern blocks, build arrays or draw arrays to show the following:
   - 6 x 3 = 18 x 1
   - 4 x 6 = 2 x 12
   - Make up your own question and describe the equality of expressions using arrays. Now give your question to a partner to solve.

The following questions give students the opportunity to use models in problems to determine the missing number in an addition or subtraction equation, using one and two digit numbers.

Use base ten blocks and numbers to solve the following.

1. 66 + 27 = 60 + 20 + ☐
2. 53 + 39 = 12 + ☐ + 50
3. ☐ + 60 + 40 = 64 + 47
4. 82 – 39 = ☐ + 30
5. ☐ + 41 = 95 – 25
6. Make up your own question and give it to a partner to solve using base ten blocks and numbers.

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